

What is claimed is:

1. A method for analysis of multiple compound samples with an analysis device having a single input channel for compounds, comprising the steps of:

5 i) introducing multiple compound samples into corresponding multiple separate solvent flow streams, with each of the flow streams being connected by connection means to an analysis device by timed selective introduction means, having means for selecting a flow from one of said multiple solvent flow streams at a time, whereby a single segmented flow stream is formed having separate segments, with each segment containing no more than one of said multiple compound samples;

10 ii) introducing the segmented flow stream into the analysis device, with the analysis device being selectively operated under conditions specific for each compound in the segmented flow stream;

15 iii) correlating the input of said samples within the segmented flow stream to a timed output analysis of said compounds whereby specific compounds are correlated to specific analysis results therefor; and

wherein output analysis for samples of any of compounds with known analytical properties and solvent function as demarcation lines between results of compounds being analyzed.

2. The method of claim 1, wherein the analysis device is a mass spectrometer.

20 3. The method of claim 2, wherein said segmented flow stream comprises four of said compounds.

4. The method of claim 1, wherein the compound segments of the segmented flow stream are separated with segments consisting essentially of a solvent.

25 5. The method of claim 1, wherein at least one of said multiple separate solvent flow streams is introduced into an HPLC device for separation prior to formation of said segmented flow stream.

6. A device effective for use in the method of claim 1 comprising:

a) means for introducing multiple compounds into corresponding multiple solvent flow streams and means for forming a single segmented multiple compound stream therefrom;

30 b) conduit means between the segmented multiple compound stream and an analysis device for providing said segmented multiple compound stream to the device for analysis of separate compounds contained within said segmented multiple compound stream;

c) means for providing a delineated separation between the sample segments of said segmented multiple compound stream; and

35 d) timing means for selectively coordinating arrival of compound segments of the segmented multiple compound stream with the appropriate analysis device acquisition of the corresponding compound, for a pre-selected period of time; and

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e) means for continuously providing said segmented multiple compound stream to the device for analysis for a predetermined cycle time.

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